A STUDY TO ASSESS THE EFFECTIVENESS OF SELF INSTRUCTION MODULE ON KNOWLEDGE REGARDING INFANTS GROWTH AND DEVELOPMENT ASSESSMENT AMONG MOTHERS OF INFANTS IN VIZHANKURICHI, COIMBATORE.

INTERNAL : Mammalian (MARIAMMAL PAPPU) 26/10/18

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INTRODUCTION

"Infant mortality and life expectancy are reasonable indicators of general well being of society"

The children in the age group of 1-5 yrs [or] under five years are the important age group in all societies, not because they constitute about 12% of the total population but because there is a renewed awareness that the determinants of chronic diseases in later life. An **Infant** is a child from 28 days to 12 months old. The Infant years are a time of great cognitive, emotional and social development. (Kiran Bains,2001)

"**Todays children are tomorrow's citizens**". The Infant period is also a vital period because of the so called socialization process .That is transmission of attitudes, customs, and behavior. In addition of course they are vulnerable to diseases, death, disability owing to their age sex, place of living socio-economic class and host of other variables .Certain physiological needs must be met to ensure the survival and healthy development of the child and future adult. (Madhu B. Singh, 2006)

M. Zaheer,(1990) stated the phenomenon peculiar to the pediatric Infant age group is growth and development. The term growth refers to increase in the physical size of the body, and development to increase in skills and functions. Growth and development are considered together because the child grows and develops as a whole.

The child growth purely is in the hands of the mother, so giving training to the mothers regarding growth assessment is highly essential, especially in the rural area. Such knowledge

helps the mother to identify the stunted growth, obesity and its preventive aspects. Improving women's nutritional status and empowering them with education, knowledge and economic position is very much essential. Throughout the growth assessment of the child the mother plays a key role .By knowing the growth standards and plotting on growth charts, the mothers can be able to assess their children growth and development.(Maribel Orozco,2003)

Child rearing practices which is recognized to have a direct effect on child health is mainly influenced by customs, superstitions, beliefs, cultural patterns, socio-economic status of families and prevailing health practices in that area .Exclusive breast-feeding practice is found to be associated with significant reduction of child's morbidity, the increasing trend for bottle feeding and early weaning are threats in developing countries, poor knowledge of mothers and illiteracy have also made it worse.(E.Reifsnider,2007)

Normal growth and development of a Infant takes place only if there is optimal nutrition .If there is a freedom from recurrent episodes of infections,and if there is freedom from adverse genetic and environmental influences, maternal and child health care is concerned with the process of growth and development, which is the foundation of human life .It is the nature of this process of physical and physiological growth and development of the child which is crucial for health or ill health for life or death. (Mary E.Lioyd,1997)

Nutritional awareness is the content of mind that relates to the choice of deserting the food .When it comes to the health of children in Infant age group mothers nutritional awareness plays the most important and major role, the level of nutritional awareness to such an extent that mothers knowledge can be measured in terms of correct information of hygiene, posture, and extent of breast feeding the right weaning practices, special nutritional deficiencies, malnutrition

and immunization keeping in view with these practices. Practices and attitudes pertaining to child rearing, especially concerned with feeding of children, have a considerable impact on nutritional status and morbidity. (Mary E.Lioyd,1997)

Anthropometric measurements are useful indicators for assessment of growth and development and nutritional status of the under-five children ex: weight, height, length and mid-upper arm circumference etc. Weight has a specially wide practical application for the reason for that it is perhaps one of the simplest anthropometric measurement of growth and development, the chest circumference, mid- upper arm circumference are considered as the most sensitive parameters for assessing nutritional status. As per the NFHS-2 survey report, almost half of children under 1 yr of age 47% were under weight and a similar percentage of 46% were stunted. The proportion of children who were surveyed are under nourished was 18% according to weight for age and 23% according to height for age. (Sunitha Mishra, 2000)

Plotting of anthropometric measurements on growth charts and interprets growth indicators, current measurements plotting and interpretations are essential for identifying growth problems. The health care provider should talk with the mother to determine the causes of poor growth. It is then critically important to take action against the poor growth in Infant.Many low-cost measures are available for saving life of millions of children like immunization, breast-feeding birth spacing, growth monitoring, improved weaning, oral rehydration etc. Attention to be focused on these elements to save the children's life. (Sadaruddin Bisws, 2007)

The child growth is purely in the hands of the mother, proper training and guidance makes the mother to identify the cause and symptoms of malnourishment in their children in

early stage. So mothers are having a greater role in the family, thus may influence on nations health and also wealth.

NEED FOR THE STUDY

The children of today are the future of tomorrow; this powerful statement assumes special significance in our context as children (0-14 years) comprise one third of the total population in the country. Every child, on provision of a conducive and an enabling environment, may blossom into an ever fragrant flower, to shine in all spheres of life. This reminds us of the onerous responsibility that we have to mould and shape their present conditions in the best possible way.

Gen (2012) has demonstrated the journey in the life cycle of a child involves the critical components of child survival, child development and child protection. Child participation which envisages their active involvement and say in the entire process adds a new dimension. Child survival entails their basic right of being born in a safe and non-discriminatory environment and grows through the formative years of life in a healthy and dignified way.

Adverse sex ratio at birth, high child mortality rates and the rapidly declining child sex ratio reflects the ensuing challenges. Reducing the level of malnutrition and micronutrient deficiency and increasing enrolment, retention, achievement and completion rates in education are the focus areas in child development. (Vijiyalakshmi, 2013)

The percentage of infant deaths to total deaths varies substantially across the states. From moderate level of 2.8% in Kerala, 5.0% in Tamil Nadu to as high as 21.8% in Rajasthan , 21.2% in Uttar Pradesh, 20.4% in Madhya Pradesh with other states figuring in between these states. The percentage of under five deaths to total deaths ranges from 3.2% in Kerala 5.9% in Tamil Nadu to 27.6% in Uttar Pradesh, 26.6% in Rajasthan, 26.4%in Madhya Pradesh, 26.7% in Bihar

while other states figure in between these states. At the national level, the percentage share of infant deaths to total deaths in rural areas is 15.8%, whereas in urban areas, the same is 9.7%. (Riar, 2004)

However, even today, after six decades of independence and despite various initiatives both on the legal as well as policy and programme levels, the condition of children remains a cause of concern in the country. The statistics emanating from various censuses, surveys and administrative records underlines this.

The problem of malnutrition India children exists despite 60 years of Independence. Unfortunately most of the under nourished children belong to either rural area or come from urban slums which are equally under privileged.

The first year of the life in child hood has a great importance. The growth and development plays a vital role during this period. Any adverse influences operating on children during this period for example – malnutrition and infections may result in severe limitations in their development. Some of them are irreversible. The concept of vulnerability calls for preventive care and special actions to meet the physiological needs that inherent in the process of human growth and development.Anthropometric measurements like weight, height, mid upper arm circumference and growth standards are important for the screening and evaluation of the health status of the children.

Brarjk, (1996) conducted a study on assessment of nutritional status of infants of Punjab in 2008. The researcher took 150 children by simple random technique. The general information was gathered by using questionnaire and anthropometry .The results reveals the mean weight was found to be less than ICMR standards for corresponding group. The results concluded that

there is a need to educate the mothers regarding nutritional needs of infants and desirable child feeding practices in order to reduce under nutrition among infant.

The educational level, position, health and nutritional level of the mothers is central to the quality of life and is a key determinant of her child's health, nutritional status, behavioral and other aspects of child welfare in developing countries .Nationwide as well as micro studies clearly shows that incidence of under nutrition among children fell monotonically with the maternal education. This is of particular concern for India due to a low literacy level of 53% for women. This figure is still lower for the women from unprivileged sections which account for highest level of under nourished children. Since nutritional knowledge and child care practices of mothers are one of the prime determinants of nutritional status of children.

As the statistics speaks out loudly, we have miles to go to ensure a bright future for the children in all spheres of their life. The nation calls for a more focused, better implemented initiatives which will transform significantly the present status of the country's children. There is a great need of the study to gain the knowledge of mothers of infant regarding growth assessment.

STATEMENT OF PROBLEM

A study to assess the effectiveness of self instruction module on knowledge regarding growth and development assessment of infants among mothers of infants in vizhankurichi, Coimbatore.

OBJECTIVES

1. To assess the Pre-test knowledge score regarding growth and development assessment of infants among mothers of infants in vizhankurichi,Coimbatore.
2. To administer self Instruction Module regarding growth and development of infants among mothers of infants in Vizhankurichi, Coimbatore.
3. To assess the post-test knowledge score regarding growth and development assessment of infants among mothers of infants in Vizhankurichi,Coimbatore.
4. To assess the effectiveness of Self Instruction Module regarding growth and development assessment of infants among mothers of infants in Vizhankurichi, Coimbatore.
5. To find out the association between post test knowledge among mothers of infants in Vizhankurichi regarding growth and development assessment with selected demographic variables.

OPERATIONAL DEFINITIONS

Assess:

In this study assess refers to evaluation of the knowledge of the mothers of infants in selected hospitals through questionnaire.

Effectiveness:

- It refers to the extent to which the training program has achieved the effect in terms of gaining knowledge regarding infants growth assessment

Self Instruction Module:

- A printed booklet that consists of information about infant's growth assessment.

Knowledge:

Refers to the level of awareness among the mothers of infants regarding growth assessment. Opinion to judge the child growth.

Mothers:

- The women who is married and is having an infant.

Growth and development Assessment:

- It refers to Progressive development of an infant in all the aspects like physical, psychsocial, psychosexual, finemotor and grossmotor .

HYPOTHESIS

H_1: There will be significant difference between the pretest and post test score regarding growth and development assessment among mothers of infants.

ASSUMPTION

The study assumes that:

- The mothers of infants in selected hospitals may have some knowledge regarding growth assessment of infants.
    - The Self Instruction Module will improve knowledge of mothers of infants in selected hospitals regarding growth assessment of infants.

CHAPTER-II

REVIEW OF LITERATURE

Related literature was reviewed in depth so as to broaden the understanding of the selected problem. An attempt has been made to receive and discuss the research and non-research literature and their findings related to the present study. The literature reviewed is presented in the following areas.

- Literature related to Anthropometric measurements
- Literature related to Growth charts
- Literature related to Growth standards
- Literature related to Nutrition
- Literature related to malnutrition
- Literature related to mothers knowledge on growth assessment.
- Growth and development Monitoring
- **Literature related to Anthropometric measurements:**

Madhu B. Singh (February, 2006) conducted a study on the nutritional status of infants in Western Rajasthan Researcher took the 279 samples in the age group of infants to assess their physical growth through Anthropometric measurements. Results revealed that physical growth measurements were comparatively better in male infants as compared to female. Mean height, weight, mid-arm circumference and Triceps skin fold measurements of children of both sexes were significantly lower than their respective reference values. On gender-wise analysis anthropometric profile was better in boys. Female children were found more prone to moderate and severe forum of malnutrition. The study thus indicated the need for education the parents regarding the nutritional requirements of growing age especially girls for their proper growth and development.

Maribel Orozco (2007) conducted a study on a scale without Anthropometric measurements can be used to identify low-weight-for age in children less than five years old in 1998. The researcher included 132 infants with weight for age under -22 score and 284 children with marginal or no weight for age deficit as a control group. The proposed scale included potential predictive variables from clinic, socio-economic factors and family factors. The best logistic regression model to predict low weight for age included birth weight less than 2,800 grams. Introduction of weaning foods after the sixth month of life, introduction of animal protein after the sixth month of life, low socio-economic status low weight for age in siblings and more than three morbidity episodes in the previous 6 months selecting cut off of 4 for this model to identify children with low weight for age showed sensitivity specificity of 85 and 95% respectively. In this population, the scale showed sensitivity of 84% and specificity of 81% to identify low weight for age. Based on these results the researcher propose that the scale be included as a means of identifying low weight for age in children who have died.

E.Reifsnider (2010) conducted a study reversing growth deficiency in children the effect of a community based intervention and published in journal of pediatric health care, volume 12, pages 305-312. The effect of a community health nursing intervention on children with growth deficiency or growth failure was examined in a pretest and post-test experimental study. This study evaluated the impact of the intervention on growth quotients, children's diets, parent child interaction, home environment, and mother's perceived stress.

2. Literature related to Growth charts:

Y.Mazron, (1997) conducted a study on standardized national growth chart of infants. Demographic data as well as the anthropometric measurements were recorded by well-trained personnel (using a pre-tested questionnaire) and new, well calibrated equipment. The current study showed that Sandi boys were heavier and that the medium weights and heights of sandi boys and girls were more than those of the Harvard standards. A growth chart was constructed which was suitable for growth monitoring programs all over the kingdom.

F. Majlesi (2002) conducted a study on growth chart study in infant in rural area of khoramabad province. Growth chart is the best measure for weight monitoring of children. Most factors that affect child health show their effect on child weight. This cross sectional and descriptive analytic study was achieved to estimate malnutrition prevalence and effective factors. 555 girls and 570 boys were chosen from health houses by cluster sampling. Data were gathered through questionnaires and child weighing. Nutritional status was estimated via weight/age index and the data were analyzed by chi-square test. The result shows 7.7% malnutrition among the children in this area. Factors that influence the nutritional status were Frequency of diarrhea and acute respiratory infection, birth weight, duration of breast feeding and milk formula.

E.Ben (2010) conducted a study on public understanding of growth charts. The researcher took a literature search was carried out to identify and analyze the findings of studies that have examined the extent to which non-health care professionals comprehend the information presented by growth charts. The results shows few studies have examined how well parents understand growth charts. These studies have mostly been conducted in developing countries and have yielded in conclusive results.

Fagbule Do (2001) conducted a study on community awareness and utilization of growth chart in an semi-urban Nizerian community The researcher took 518 mothers receding in Edita, Nizeria. Mothers were interviewed to assess their knowledge, Utilization and understanding of the growth charts. 5 health facilities in the communities' studies were visited to assess the availability, utilization and understanding of growth charts by health workers. Over half(53.7%) of the mothers interviewed had heard about growth charts. The level of awareness was significantly influenced by maternal age, educational status and parity. Of those who had heard about growth charts, only 155 (55.8%) have it, and 150 of these (96.8%) use it regularly, 174(33.6%) of all mothers, but 62.6% of those who had heard about the chart demonstrated on understanding of the markings on it. 116 mothers found the growth chart useful for immunization record, nutritional advice, clinic appointment date, and assessment of development milestones. However growth charts do not have a wide coverage in the Ilorin community.

4. Literature related to Nutrition:

Moisiur Rahman, (2004) conducted a study in rural Bangladesh on statistical methods to identify the factors associated with nutritional status among children aged 2-12 months, assessment measured by BMI (Body Mass Index).The researcher took 652 children

descriptive and multivariate logistic regression methods were employed in analyzing the data. It was observed that girl children were more under weighted than the boys. This study elucidates that although maximum numbers of children have healthy weight a large portion of them were under weighted.

Kiran Bains (1999) conducted a study on assessment of nutritional status of infant children belonging to farm families of Punjab in 2008. The researcher took 150 children two stage random sampling technique was used the general information about selected families was recorded using as questionnaire and anthropometry. The results reveals, the mean weight of boys and girls was found to be less than ICMR standards for corresponding groups the results concluded that there is a need to educate the mother regarding nutritional needs of young children and desirable child feeding practices in order to reduce under nutrition among children.

5. Literature related to malnutrition:

Susan Shepherd (1999) conducted study on assessing the impact of the introduction of the WHO standards and weight for age 2 score criterion on the response to treatment of severe acute malnutrition in children in 2008. The researcher took samples of aged 2-24 months with acute malnutrition who were admitted to the medicines sans fractures nutrition program in maradi Niger during 2006 (N=562140). A total of 8 times male children (N-25754) were classified as severely malnourished according to the WHO standards compared with the national center for health statistics reference (n=2898). Children included according to WHO standards had shorter duration of treatment, greater rate of recovery, deaths and less, less to follows-up or needed for inpatients case.

Mercedes (2006) conducted a study on comparison of the World Health Organization (WHO) child growth standards and the national centre for health statistics/WHO international growth references, implications for child health program at Bangladesh North America & Northern Europe. He took 4787, 10381 and 226 infants and children and conducted secondary analysis of longitudinal data to compare growth patterns (birth to 12 months) and data from two cross-sectional surveys to compare estimates of malnutrition among under-fives.The results revealed healthy breast-fed infants tracked along the WHO standards weight for age man z-score while appearing to falter on the (NCHS) national centre for health statistics references from 2 month onwards. Under weight rates increased during the first 6 months and there after decreased when based on the WHO standards. For all age groups stunting rates were higher according to the WHO standards, wasting and severe wasting was substantially higher during the first half of infancy. There after the prevalence of severe wasting continued to be 1.5 to 2.5 times that of the NCHS references. The increase in over weight rates based on the WHO standards varied by age group, with an overall relative increase of 34%.

Swapan Kumar Roy (2001), conducted a study on can mother identify malnutrition in their children in Bangladesh. the researcher tool 339 children aged 3-35 months and their mothers were studied in two urban hospitals in Dhaka ,Bangladesh and in a community clinic, the weight, height, MUAC of the children were measured and their mothers were interviewed. Child nutritional status according to their mother's statement and anthropometrically assessed nutritional status were compared .60% of the mothers correctly identified better nutritional status (weight/age>75% of NCHS median) and 67% of mothers correctly identified malnutrition (weight/age>75% of NCHS median) in their children. 61% of mothers with less than 5 years of formal education correctly identified better nutrition (weight/age>75%). The results suggest that

most of the mothers are able to identify malnutrition in their children, and 95% of them are aware of ways to improve it, and that the provision of adequate food and health care may improve child nutritional status.

T.Ahmed (2008) conducted a study on effects of psychosocial stimulation on growth and development of several malnourished children in a nutrition unit in Bangladesh. Severely malnourished children aged 6-24 months admitted to the NRU were enrolled. All received standard nutritional care. A control group of 43 children was studied initially, followed by an intervention group of 54 children. The intervened mothers and children participated in daily group meetings and individual play sessions for 2 weeks in hospital and were visited at home for 6 months. Children growth was measured and development assessed using the Bayley Scales of infant development. 27 children were lost in the study. In the remaining children, both groups had similar development scales and anthropometry initially. After 6 months, the intervention group had improved more than the controls.

6. Literature related to mothers knowledge on growth assessment:

Jadab,C.S (1997) counted a study on feeding practices and morbidity pattern among infants in a rural area of south 24 PG S district, west Bengal. the researcher tool 126 infants of 0-6 months of age were selected by multi stage sampling technique it was found that all infants were attempted for breast feeding after birth but only 3.3% infants breast feeding was initiated with an hour after birth while in majority of babies [53.3%] breast feeding was initiated beyond 24 hours out of 126 infants 112 infants were fed colostrums [93.3%] so the pregnant women and their family members should be motivated for exclusive breast feeding for 6 months.

CharKatare, Veena Shrivastava And Shailaja Jain conducted a study on socio-cultural factors as determinants of nutritional awareness in mothers of infants in Gwalior city in 2009. The researcher took 300 mothers belonging to different socio-cultural /socio-economic back ground that were identified from various demographics of gwalior by random sampling. The results reveals a positive association between socio-economic status of the family , age and literacy status of mother and the level of nutritional awareness whereas factors like caste, type of family and occupation had on association with nutritional awareness.

Homero Martinez Miriammunoz De Caveg Noe Guarneros,Alicia Rios, And Adolfo Rios, And Adolfo Chavez conducted a study in1990 on mothers knowledge, understanding and use of bubble charts in a rural area of central mexico. The researcher took 85 mothers in a rural area of central mexico the evolution was done by pre and post intervention design the results shows statistically significant [$p<.05$] increase in knowledge interpretation and application the mothers ranked highest in knowledge the children's nutritional status increased significantly [$p<.001$] between pre and post intervention.

Thamer Kadum Yousifal Hilfy conducted a study in 2004-05 on mothers knowledge and attitude regarding child hood survival. the researcher took a cross sectional cohort study on randomly selected samples of mothers having children less than 2 years attending the primary health care centers in tikrit city a special questionnaire was prepared for this purpose the results shows. Only about 45% of these mothers had a positive practice to words breast-feeding mothers[28.9%] about 35.2% of mothers have no idea about what complementary food should be added in the various child age groups.

CONCEPTUAL FRAMEWORK

Conceptualization is the process of forming ideas, design, and plans. A conceptual framework deals with concepts assembled together by virtue of their relevance to the research problem, which provides a certain frame of reference for clinical practices, research and education. It gives direction for planning research, design, data collection and interpretation of findings.

Conceptual framework is defined as a theoretical approach to the study of problems that are scientifically based, which emphasizes the selection, arrangement and classification of its concept. A conceptual framework states the functional relationships between the events and is not limited to statistical relationship.

The conceptual framework of the present study is based on the general system theory with input, process, output and feedback which was introduced by Ludwig Von Bertalanffy.

In the present study, these concepts are explained as follows

Input: Subjects are a system and has input within the system itself and acquired from the environment. These inputs include the subject‘s background like age, primi, education,socio economic status. This may influence the knowledge of the subjects.

Process: It is the action needed to accomplish the desired task. To achieve the desired output, to assess the effectiveness of the self instructional module in this study, the process includes three phases. The first phase was the determining the knowledge of mothers of infants regarding infants growth assessment by administering structured questionnaire. The second phase consists of preparation and administration of Self instruction module on infants’ growth assessment. The third phase consists of evaluation of target group (post test) after 7th day of administration of self instructional module for change in knowledge regarding infants’ growth assessment.

Output: After processing the input, the system returns the output (energy and information) to the environment. Matter, energy and information are continuously processed through system and released as output.

Change is a feature of the process that is observable and measurable as output, which should be different from that which is entered in the system that is input. In the present study, the output indicates the gain in the knowledge of the infants' mothers after the administration of the Self instructional module.

Feedback: It refers to the process by which information is received at each stage of the system and is fed back as input to guide/direct in its evaluation. In the present study feedback is not included. It is the process that provides information about the system output and act as input.

Environment: It refers to the environments of the mothers of infants fixed constraints that influence the effectiveness of the Self instructional module.

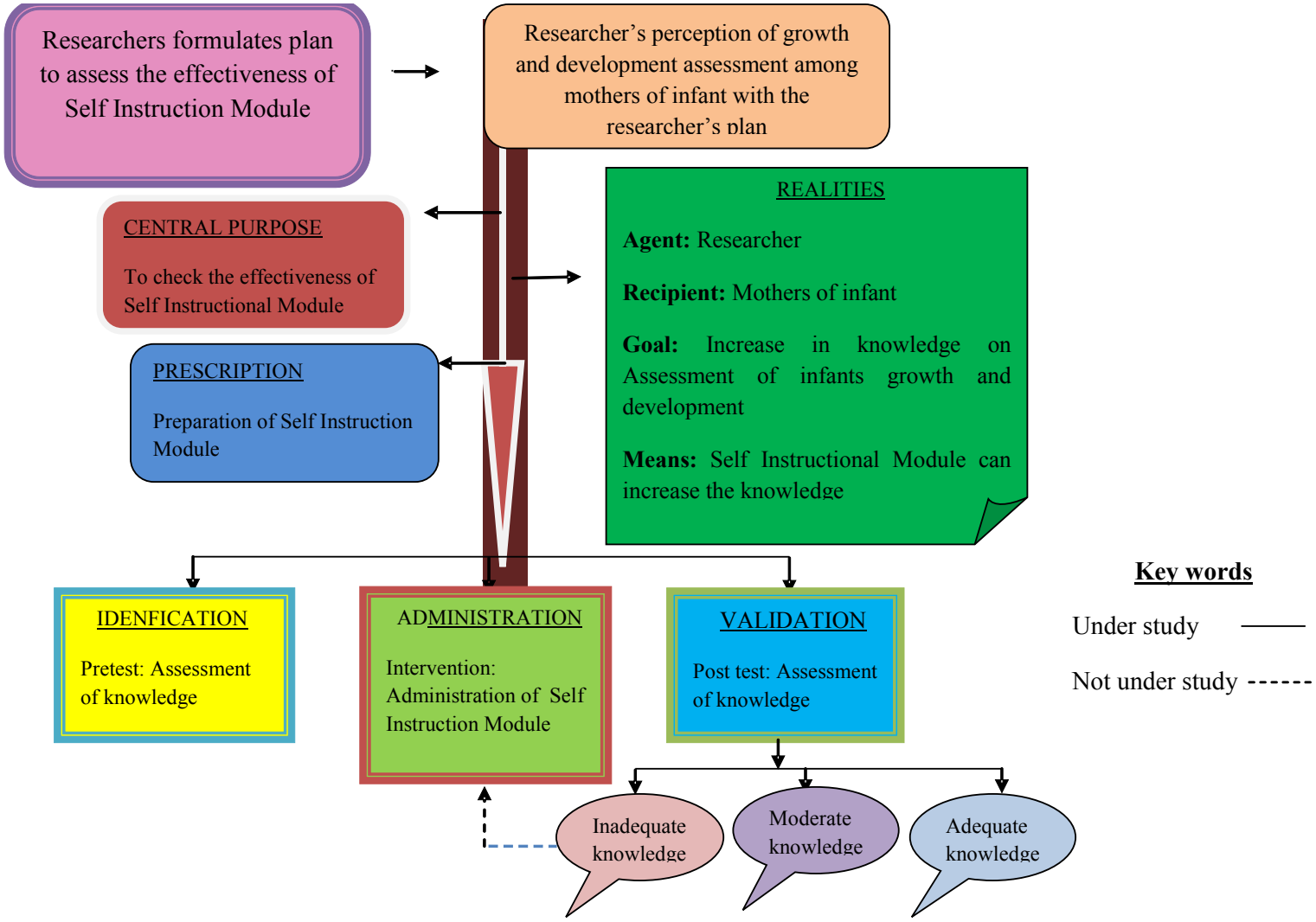


Fig 3: Modified Earnstine Wiedenbach's Prescriptive theory: Clinical nursing: A helpful art

CHAPTER-III

METHODOLOGY

Research methodology refers to the systematic way of solving a research problem. It indicates the general pattern for organizing the procedure for empirical study together with the method for obtaining valid and reliable data for problem under investigation[26].

This chapter deals with the methodology selected for the study. It includes research approach and designs, setting of the study, variables, population, sample, sample size and sampling technique, development of the tool, pre-testing of the tool, reliability of the tool, development of the Self Instructional Module, content validation of Self Instructional Module, pre-testing of the Self Instructional Module, pilot study, data collection process and plan for data analysis are discussed.

Research approach

In the present study an evaluative approach was used.

Research design

The research design selected for this study was one group pre-test – post-test design.

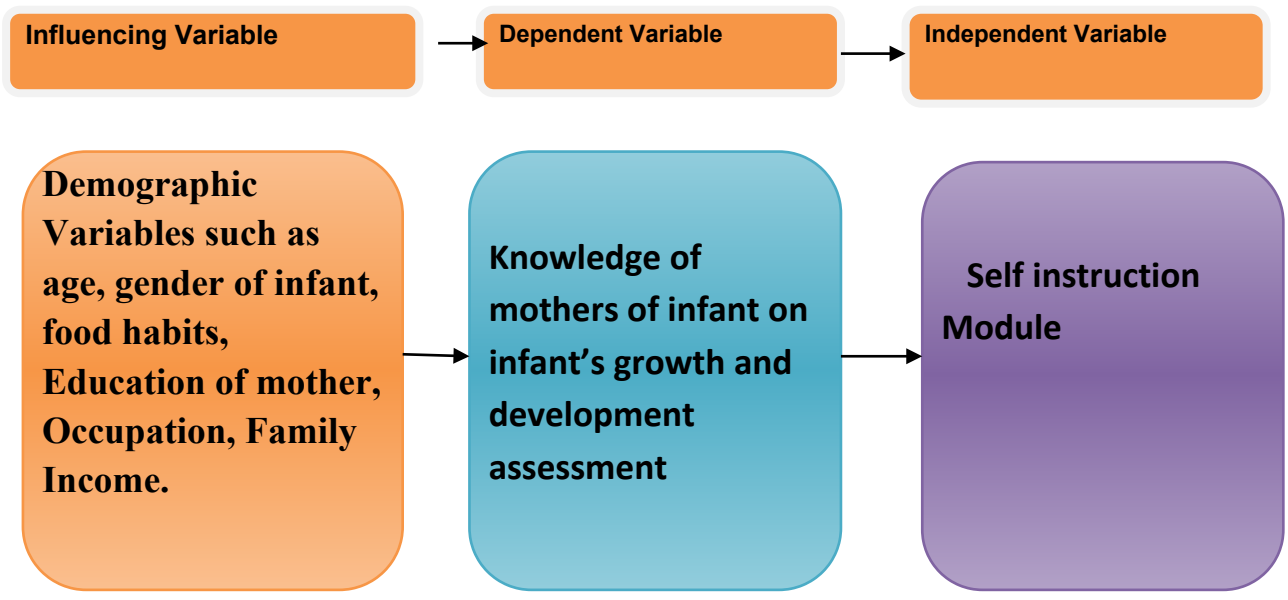
Figure.2 The schematic representation of the research design

Setting of the study

- Study was conducted among the mothers of infants at villankurichi, Coimbatore.

Variables

Independent variables was self instruction module on infants growth and development assessment among mothers of infant.The dependent variable was knowledge of mothers of infant. Influencing variables were demographic variables.



Population

The population of the study includes the mothers of infants at villankurichi, Coimbatore.

Sample Size

60 mothers of infants who met the inclusive criteria were selected.

Sampling technique

Non probability purposive sampling technique was used for selection of sample.

Criteria for selection of Sample

Inclusion criteria

Mothers of infants who are:

- willing to participate in this study.
- available at the time of data collection.
- able to read and write Tamil.

Exclusion criteria

Mothers of infants who are not:

- available during the period of data collection
- willing to participate in the study

Description of the tool

A questionnaire was developed after reviewing the literature and considering the opinion of Paediatric Nursing subjects experts to determine the effectiveness of self instruction module on SIM knowledge regarding assessment of growth and development among mothers of infant. The questionnaire was constructed in Tamil. In the present study the tool consists of 2 parts

Section A-Distribution of Demographic variables

Present study consists of demographical variables such as age, parity, religion, educational qualification, occupation, monthly income of the family, type of family, type of marriage and family food habit.

Section A –Questionnaire regarding growth and development assessment among infant

It consists of 25 knowledge questionnaire items related to growth and development assessment like growth assessment in the aspects of physical, psychosocial, psychosexual, fine motor and gross motor development, reflexes and milestones.

Interpretation of the questionnaire

Knowledge questionnaire regarding assessment of infants growth and development. The knowledge questionnaire includes 25 multiple choice questions, each carries 1 mark, based upon the score obtained by the participants they were grouped as three categories.

Inadequate knowledge	Upto 8 marks
Moderate knowledge	Between 9 to 17marks
Adequate knowledge	Between 18 to 25marks

Testing the tool

Testing of the Tool

Content Validity

The tool was given to six experts in the field of paediatrics for content validity. All the comments and suggestions given by experts were duly considered and corrections made after discussion with the research guide.

Reliability

The reliability of the tool was determined by Spearman brown split half Technique showing r=+0.9 for knowledge.

The reliability of the tool was satisfactory.

Pilot study

The Pilot study was conducted to make sure that the tool was capable of eliciting responses from the respondents. It was conducted among 6 mothers of the selected village for a period of one week. The period was feasible to conduct the study and the results shows that the mothers gained knowledge in the post test score.

Data collection process

A formal written permission for the main study was obtained by the investigator from the concerned authorities before the data collection. Data collection period was carried out for a

period of 4 weeks. The purpose and duration of the study was explained to the samples to obtain their cooperation and informed consent was explained. The samples were selected according to selection criteria. The questionnaire was distributed to assess the knowledge regarding growth and development of infants. Data collection was done using the structured questionnaire in the form of rating scale. The total number of questionnaire was 25.It took 15-30 minutes to gather information from each sample. On the same day the self instructional module was given to the mothers. A post-test was conducted on the 7th day using the same tool. Each mother was thanked individually for their participation and cooperation.

Plan for data analysis

Descriptive and inferential statistics was used for the analysis of data and the significant findings were presented in the form of tables, and figures &graphs. The proposed study was conducted after the approval of research committee. The oral consent of each individual was obtained before data collection. Assurance was given to the study participants regarding the confidentiality of the data collection.

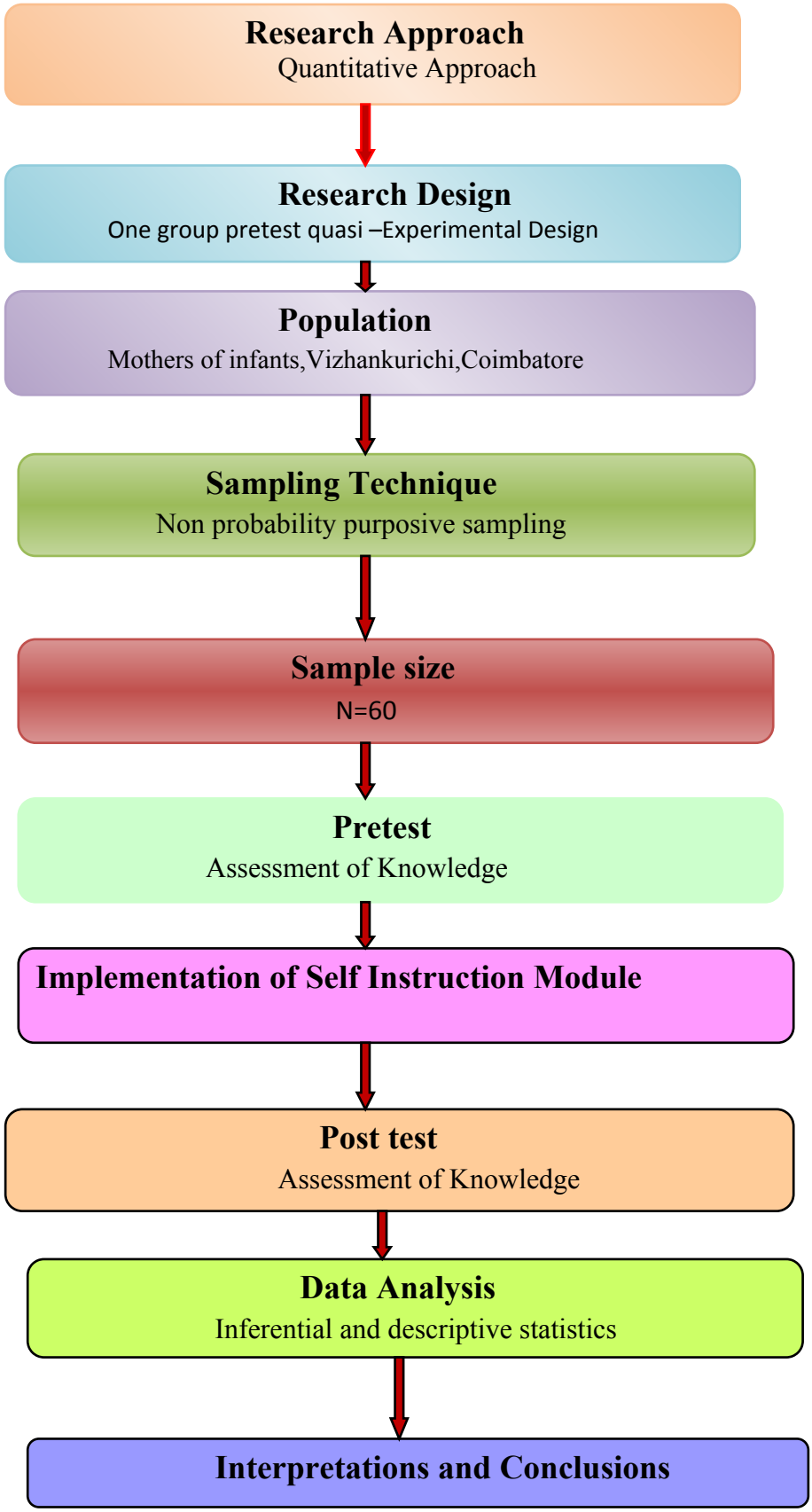

Research Approach
Quantitative Approach
Research Design
One group pretest quasi –Experimental Design
Population
Mothers of infants,Vizhankurichi,Coimbatore
Sampling Technique
Non probability purposive sampling
Sample size
N=60
Pretest
Assessment of Knowledge
Implementation of Self Instruction Module
Post test
Assessment of Knowledge
Data Analysis
Inferential and descriptive statistics
Interpretations and Conclusions

Figure .4 The overall View of Research Methodology

CHAPTER-IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of data obtained from 60 mothers of infants from vizhankurichi, Coimbatore. Descriptive and inferential statistics were used to analysis the collected data.

The data findings have been organized and finalized according to the plan for data analysis and presented under the following sections.

Section I: Description of demographic characteristics of respondents

Section II: Assessment of the pre test knowledge regarding assessment of infants growth and development among mothers of infants

Section III: Assessment of the post test knowledge score regarding assessment of infants growth and development among mothers of infants

Section IV: Comparison of pre test and post test level of knowledge score regarding assessment of infant's growth and development among mothers of infants.

Section V: Association of pre test knowledge with their demographic variables

SECTION I

Table.1 Description of demographic variables of selected mothers of infant

(N=60)

S.NO	Demographic Variables	Mothers of infant	
		Frequency (F)	Percentage (%)
1.	Age in years		
	a)19-23	10	16.66
	b)24-29	13	21.66
	c)30-34	26	43.33
	d)35-40	11	18.33
2.	Gender of child		
	a)Male	33	55
	b)Female	27	45
3.	Mothers Education		
	a)Professional	12	20
	b)Graduate	15	25
	c)Basic education	33	55
	d)Illiterate	0	0
4.	Mothers Occupation		
	a)Professional	16	26.66
	b)Business/Private	18	30

	c)Government d)Unemployed	4 22	6.66 36.66
5.	Religion a)Christian b)Muslim c)Hindu d)others	 24 4 32 0	 40 6.66 53.33 0
6.	Family Income per month a)Below Rs 5000/- b)Rs 5001-10000/- c)Above 10000/-	 8 34 18	 13.33 56.66 30
7.	Food Habits a)Non Vegetarian b)Vegetarian	 45 15	 75 25
8.	Type of Family a)Joint b)Nuclear	 18 42	 30 70

Table 1 Reveals distribution of demographic data of mothers of infants

- Regarding age of the mother in years 10 (16.66%) belong to the age group between 19-23, and 13 (21.66%) from 24-29 years and 26 (21.66%)are between 30-34years and 19 (43.33%)are between the age of 35-40 years.
- Regarding gender of the infant 27 (45%) are female and 33 (55%)are male.
- With regard to mothers education 12 (20%) have professional degree and 15 (25%) have their graduation and 33 (55%) have basic education. None of them are illeterates.
- Regarding mothers occupation 16 (26.66%) are doing professional job and 16 (30%) were having business/private job and 4 (6.66%) have Government job and 22 (36.66%) are unemployed.
- With regard to religion 32 (53.33%) belong to Hindu religion and 4 (6.66%) belong to Muslims and 24 (40%) belong to Christian. Nobody is from other religion.
- Regarding Family Income 8 (13.33%) have family income below Rs 5000/- and 34 (56.66%) with income Rs.5001-Rs.10000/- and 18 (30%) have income above Rs.10000/- per month.
- With regard to food habit 45 (75%) have non vegetarian food and 15 (25%) have vegetarian food.
- Regarding type of family 18 (30%) belong to joint family and42 (70%) belong to nuclear family.

SECTION –II

Table.2 Distribution of Frequency and Percentage of pretest and Posttest Scores based on level of knowledge of mothers of infant regarding Infant assessment of growth and development

S.NO	Level of Knowledge	Pretest		Posttest	
		f	%	f	%
1.	Adequate	14	23%	55	92%
2.	Moderately Adequate	33	55%	5	8%
3.	Inadequate	13	22%	0	0%

The data presented in the table 2 shows out of 60 mothers of infants, the greater strength had moderately adequate knowledge regarding growth and development assessment of infants during their pre test and most of them had adequate knowledge during their post test.

SECTION-III

Table.4 Distribution of statistical values of pretest and posttest scores of knowledge of mothers of infant regarding assessment of growth and development of infants

S.NO	**Knowledge**	**Mean**	**Standard Deviation**	**'t' value**
1.	Pretest	**9.16**	**1.75**	
2.	Post test	**12.03**	**1.35**	**13.3***

***Significant at 0.05 level**

Table 4 shows that the mean pretest knowledge score was 9.16 and that of post test was 12.03.The calculated 't' value13.3 at 59 df was significant at 0.05 level. It implies that the improved after implementing self instruction Module regarding assessment of growth and development of infants

SECTION-IV

Table .5 Association of selected Demographic variables with Pretest score of knowledge among mothers of infant regarding assessment of growth and development

(N=60)

S.NO	Demographic Variables	Above Mean	Below Mean	Degree of freedom	X^2
1.	Age in years				
	a)19-23	8	9		
	b)24-29	10	5	3	0.75
	c)30-34	5	4		
	d)35-40	4	5		
2.	Gender of child				
	a)Male	18	8		
	b)Female	17	17	1	0.02
3.	Mothers Education				
	a)Professional	19	17		
	b)Graduate	6	4		
	c)Basic education	8	3	4	4.39
	d)Illiterate	2	1		
4.	Mothers Occupation				

	a)Professional b)Business/Private c)Government d)Unemployed	14 6 4 1	22 4 7 2	4	4.39
5	Religion a)Christian b)Muslim c)Hindu d)others	 12 13 5 0	 16 12 2 0	3	2.23
6.	Family Income per month a)Below Rs 5000/- b)Rs 5001-10000/- c)Above 10000/-	 2 14 14	 5 15 10	1	0.02
7.	Food Habits a)Non Vegetarian b)Vegetarian	 12 18	 11 19	3	1.58

8.	Type of Family a)Joint b)Nuclear	 23 7	 12 18	4	2.79

Table 5 shows the association of pretest attitude score with demographic variables like mothers age, gender of infant, education of mother, Occupation of mother, monthly income, food habits, religion and type of family of mothers of infant. Variables were not having significant association with the pretest knowledge score.

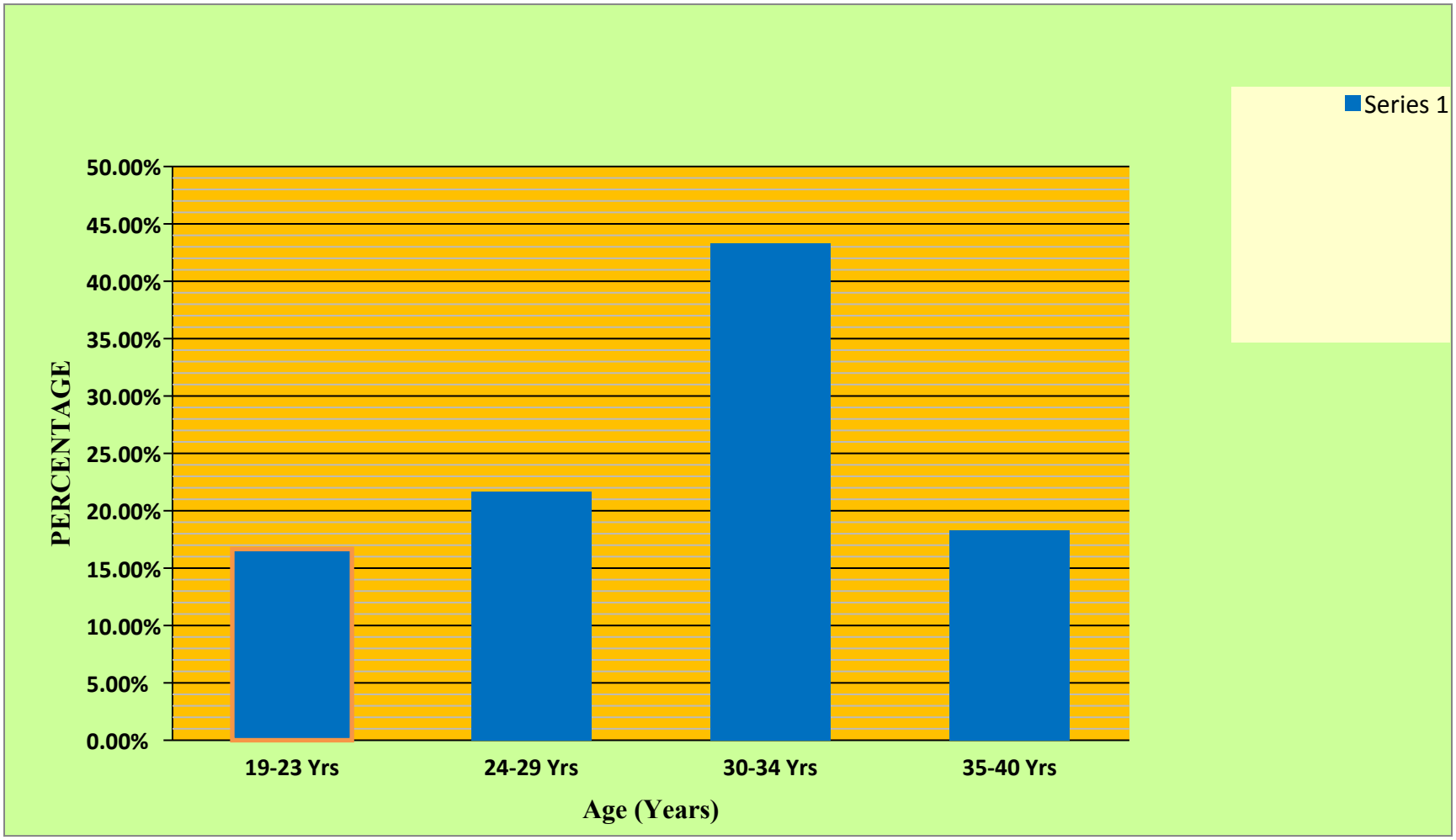


Figure. 4 Distribution of Demographic Variables according to the age of Mothers

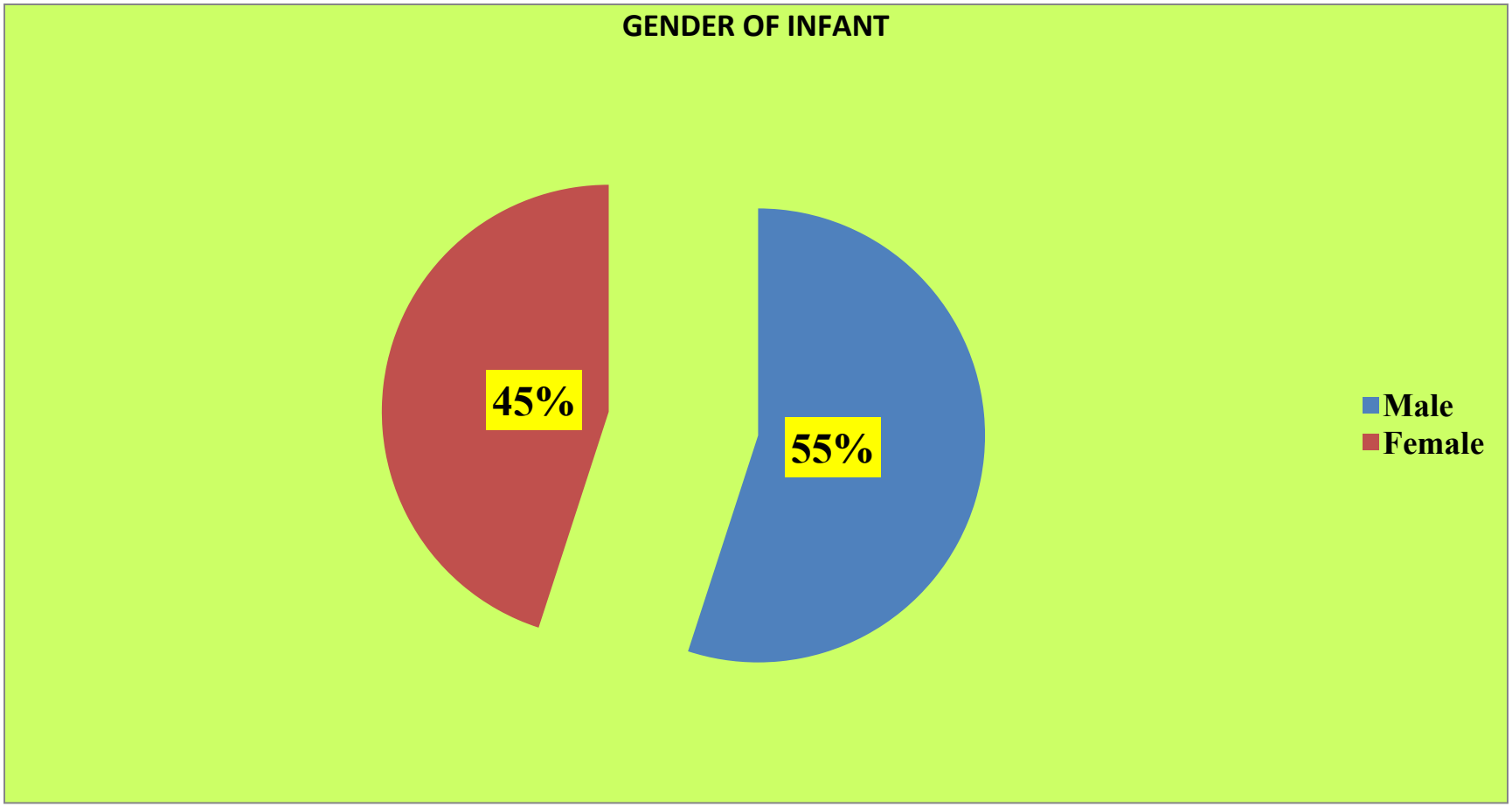


Figure. 5 Distribution of Demographic Variables according to gender of infant

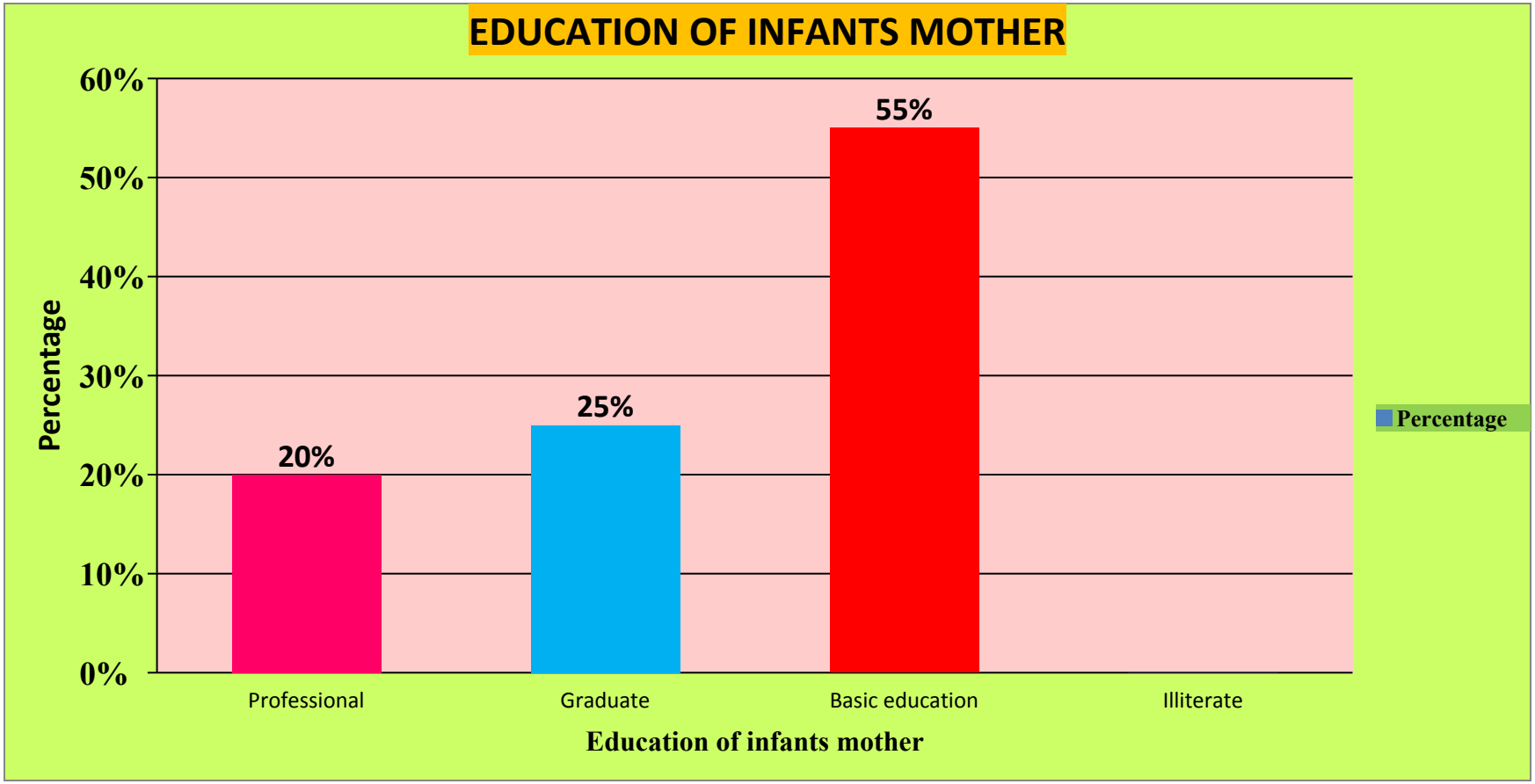


Figure.6 Distribution of Demographic Variables according to the education of infants' mother

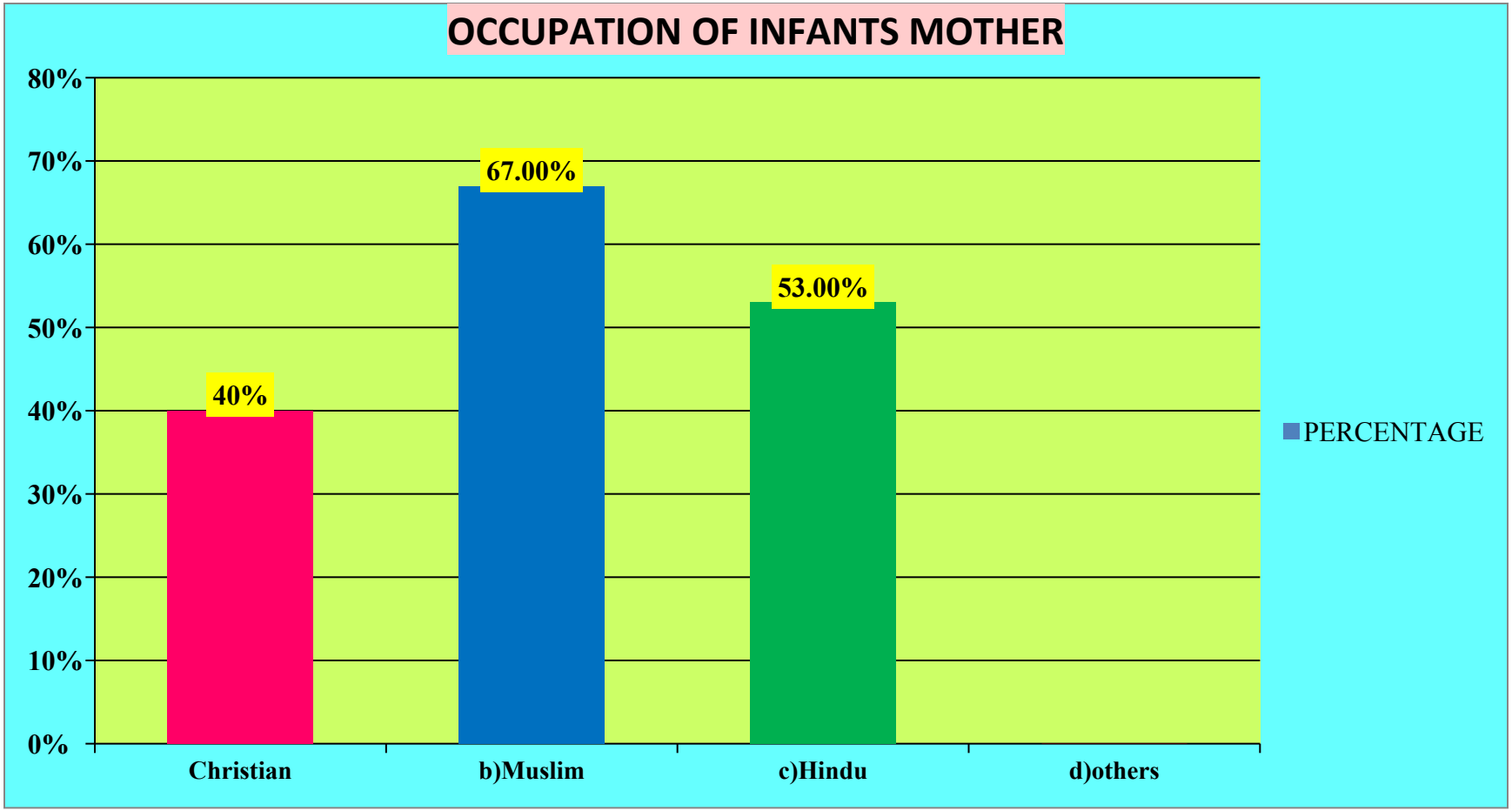


Figure.7 Distribution of Demographic Variables according to the occupation of infants' mother

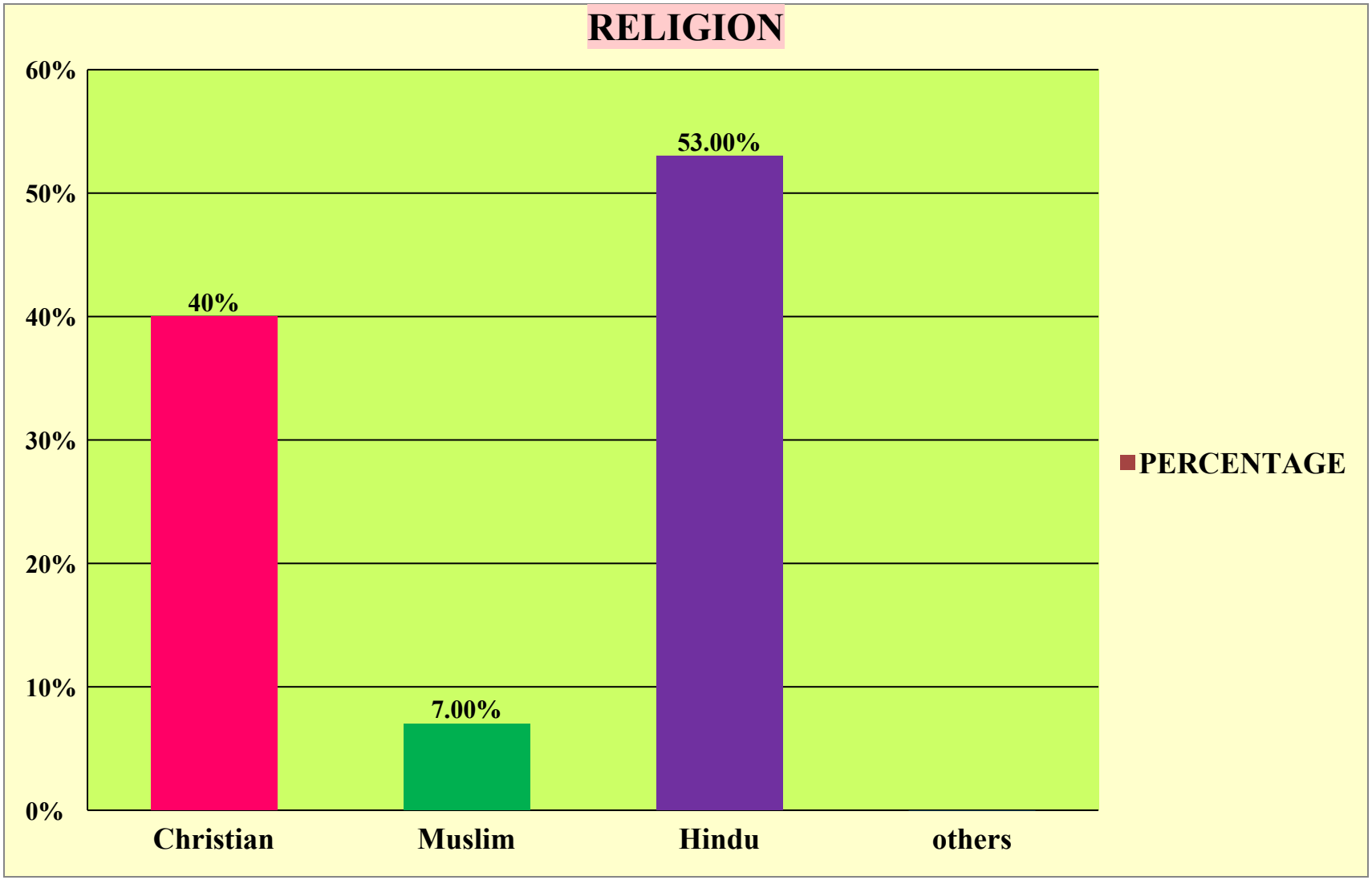


Figure.8 Distribution of Demographic Variables according to Religion

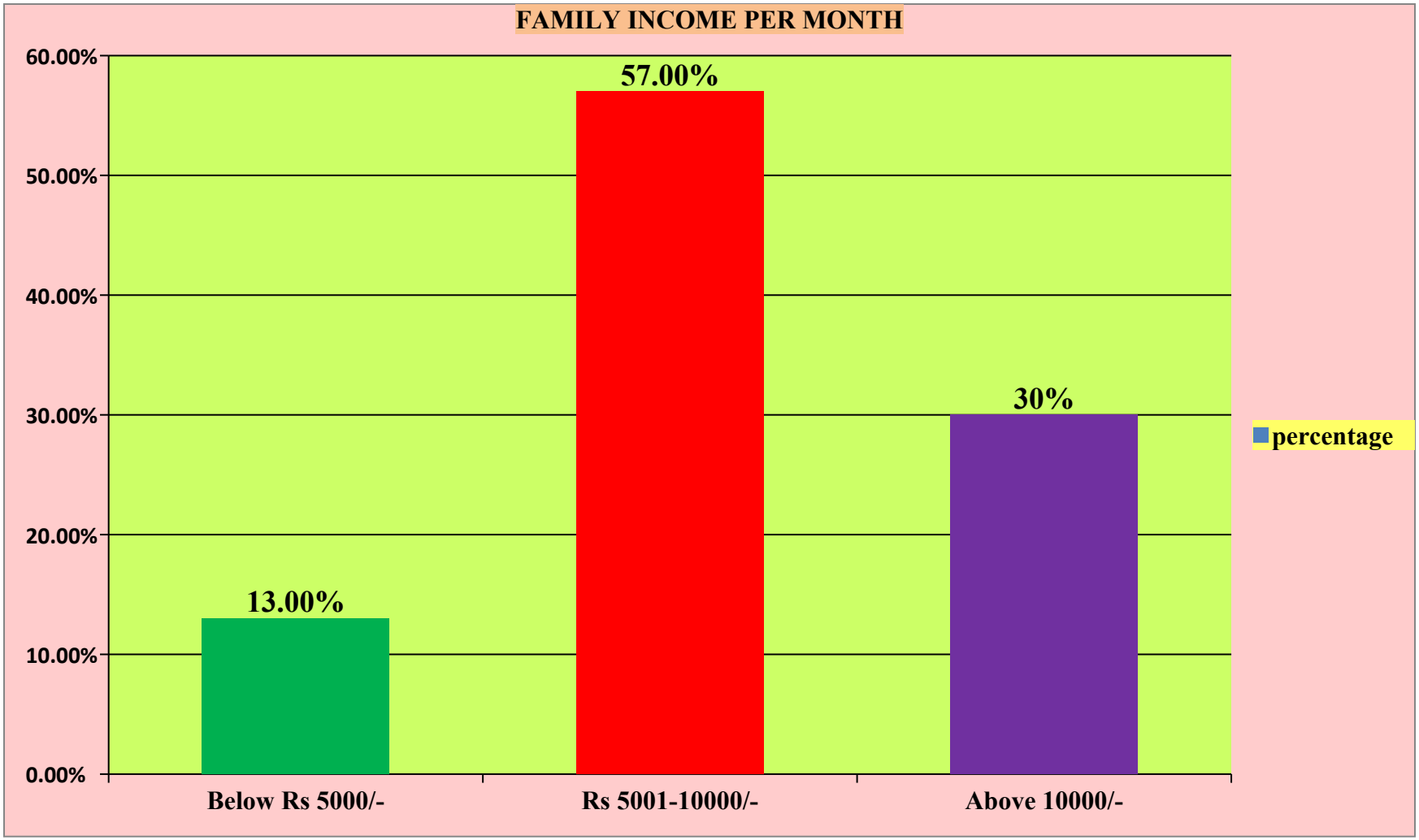


Figure.9 Distribution of Demographic Variables according to family income per month

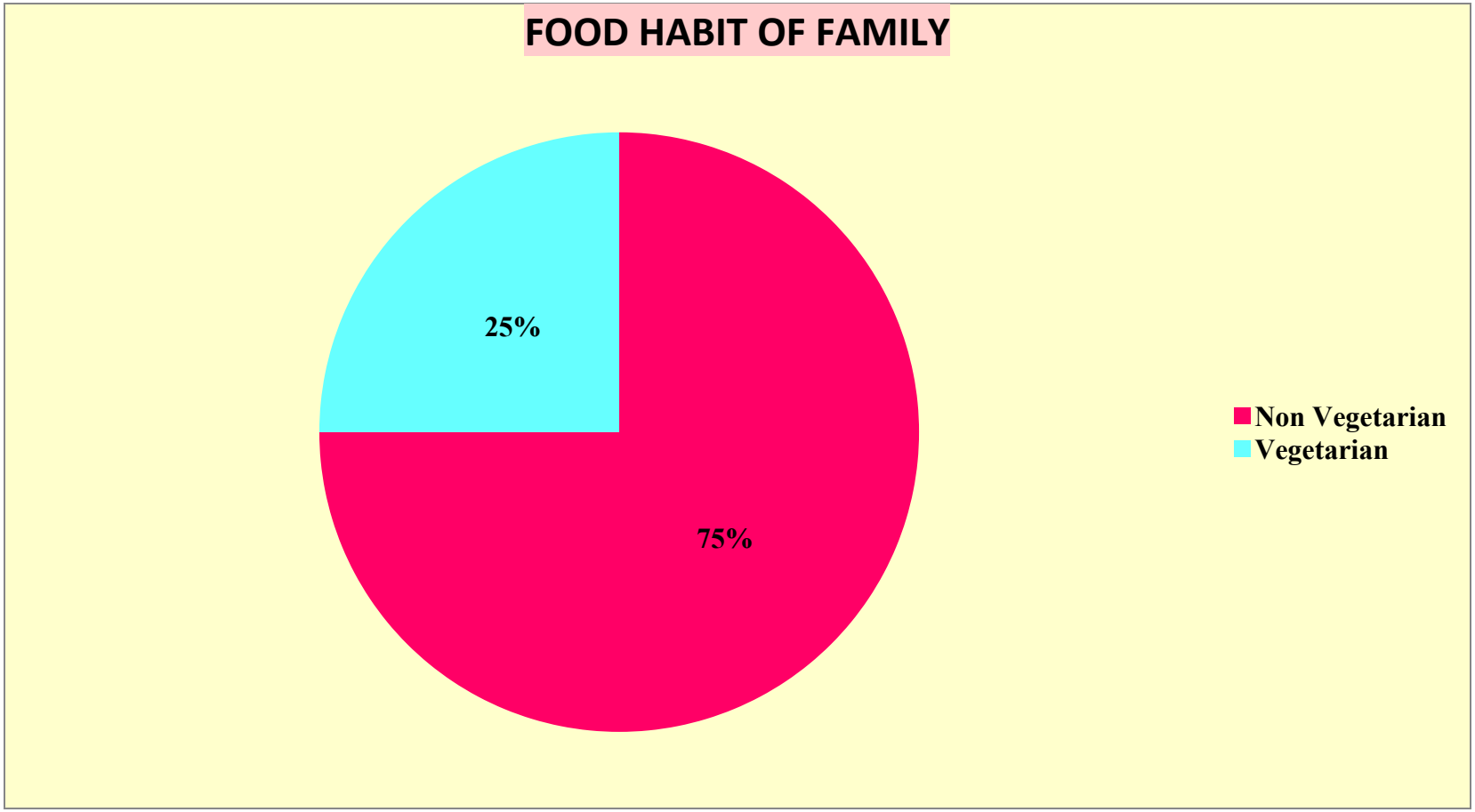


Figure.10 Distribution of Demographic Variables according to food habit of family

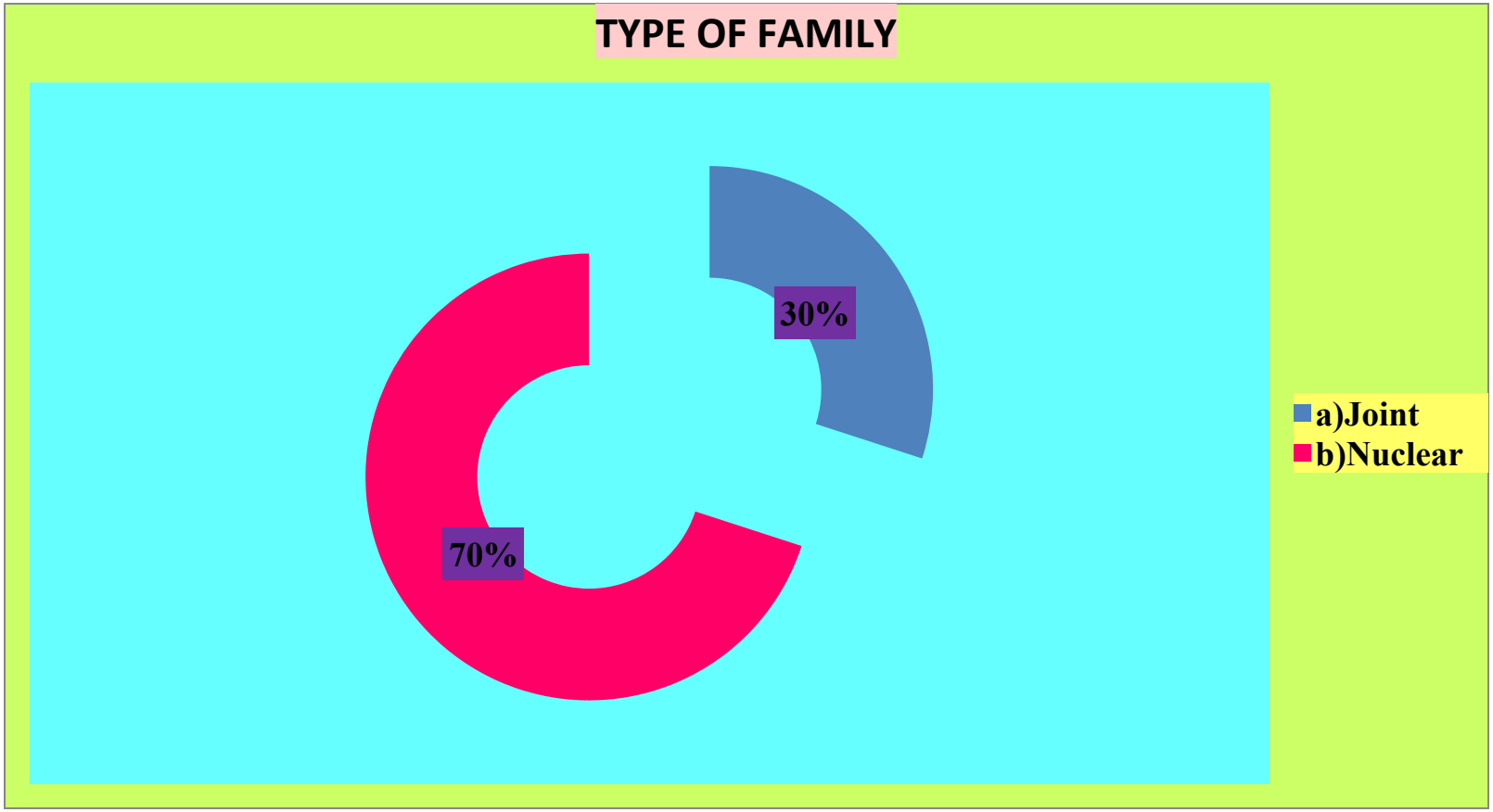


Figure.11 Distribution of Demographic Variables according to type of family

CHAPTER-V

Results and Discussion

This is a Quasi-Experimental Study intended to know the effectiveness of Self instruction Module on Asessment of growth and development among mothers of infants at vilankurichi,Coimbatore.

First Objective of the study was to Assess the knowledge of mothers of infant regarding assessment of infants growth and development

The present study reveals that the pretest mean score for knowledge is 9.16.This reveals that there was inadequate knowledge about assessment of infants growth and development among mothers of infant.

These findings were supported by Jadab,C.S and Pandkaj(2011) conducted a study about knowledge on infant assessment among mother of infant which revealed that 40% had no knowledge about growth and development assessment of infants. Majority was lagging knowledge and some have received knowledge from Television.

Second objective of the study was to deliver self Instruction Module regarding assessment of growth and development in infants

The self Instruction Module was given by using information booklet to 60 samples selected by Non probability purposive sampling technique. It was considered effective since they began to read and clarify their doubt regarding assessment of growth and development in infants.

Third objective of the study was to find out the effectiveness of self instruction Module regarding assessment of growth and development among mothers of infants.

The pretest mean score for knowledge was 9.16 and the post test mean score was 12.03.Thereby the‘t’ value for knowledge was 13.3. the ‘t’ value obtained for knowledge regarding assessment of growth and development of infants was higher than the table value at 0.05 level of significance. This reveals that there was significant improvement in knowledge in the assessment of growth and development of infants among mothers of infants. this in turn reveals that the self Instruction Module was effective.

Gowri.N(2007) conducted a quasi experimental study to assess the effectiveness of self instruction module on knowledge regarding infant growth and development assessment among rural areas of Bihar.

Fourth Objective of the study was to determine the association between selected demographic variables and pretest knowledge score of mothers of infants.

There was no significant association between demographic variables such as age, Gender of the infant, religion, monthly income of the family, mothers Education, mothers occupation, food habit and type of family.

A similar study was conducted by Kiran Bains on assessment of nutritional status of infant belonging to farm families of Punjab in 2008. The researcher took 150 children two stage random sampling technique was used the general information about selected families was recorded using as questionnaire and anthropometry. The results reveals, the

mean weight of boys and girls for all age groups that was found to be less than ICMR standards for corresponding groups the results concluded that there is a need to educate the mother regarding nutritional needs of young children and desirable child feeding practices in order to reduce under nutrition among children.

CHAPTER-VI

Summary, Conclusion, Nursing Implications, Limitation and recommendation

Summary

The study was conducted on the effectiveness of Self instruction Module on growth and development assessment of infants among mothers of infants in Vizhankurichi, Coimbatore.

The Following Objective were set for the study

1. To assess the Pre-test knowledge score regarding growth and development assessment of infants among mothers of infants in vizhankurichi,Coimbatore.
2. To administer self Instruction Module regarding growth and development of infants among mothers of infants in Vizhankurichi,Coimbatore.
3. To assess the post-test knowledge score regarding growth and development assessment of infants among mothers of infants in Vizhankurichi,Coimbatore.
4. To assess the effectiveness of Self Instruction Module regarding growth and development assessment of infants among mothers of infants in Vizhankurichi,Coimbatore.
5. To find out the association between post test knowledge among mothers of infants in Vizhankurichi regarding growth and development assessment with selected demographic variables.

Hypothesis Set for the study

There is a significant improvement in knowledge regarding growth and development assessment of infants among mothers of infants.

Major Findings of the study were as Follows

- The pretest mean value of knowledge was 9.16
- The post test mean value of knowledge was 12.03
- The obtained at 't' value for the comparison of knowledge score at $p<0.05$ level was 13.3
- There was no association between pretest knowledge score with the selected demographic variables

Conclusion

The mean post test score knowledge where higher that the pre test scores. The findings confirm the effectiveness of Self instruction Module regarding growth and development assessment of infant among mothers of infant. It is understood that the Self Instruction Module will improve the knowledge on assessment of infants growth and development among mothers of infant.

CHAPTER-VI

Summary, Conclusion, Nursing Implication,

Limitation and Recommendation

The study was conducted to assess the effectiveness of Self Instruction Module on infants growth and development among mothers of infant.

Stunted growth and malnutrition are the most common problems among infant in India. The present study indicated that most of the mothers especially in rural area, are having inadequate knowledge regarding growth and development assessment of infant. The investigator developed a training module on growth and development assessment and interpreting the growth indicators which is appropriate, feasible and motivate the mothers to update the knowledge in the aspect of growth monitoring and child care.

The following objectives were set for the study

6. To assess the Pre-test knowledge score regarding growth and development assessment of infants among mothers of infants in vizhankurichi, Coimbatore.
7. To administer self Instruction Module regarding growth and development of infants among mothers of infants in Vizhankurichi, Coimbatore.
8. To assess the post-test knowledge score regarding growth and development assessment of infants among mothers of infants in Vizhankurichi, Coimbatore.
9. To assess the effectiveness of Self Instruction Module regarding growth and development assessment of infants among mothers of infants in Vizhankurichi, Coimbatore.

10. To find out the association between post test knowledge among mothers of infants in Vizhankurichi regarding growth and development assessment with selected demographic variables.

The Alternative objectives set for the study

There is a significant difference between knowledge with regard to infants growth and development assessment in pre and post test score.

Major Findings of the study were as Follows

- The pretest mean value of knowledge was 9.16
- The post test mean value of knowledge was 12.03
- The obtained at't' value for the comparison of knowledge score at $p<0.05$ level was 13.3
- There was no association between pretest knowledge score with the selected demographic variables

Conclusion

The educative measures show that significant improvement in knowledge regarding knowledge in growth and development among mothers of infant. The post test scores of knowledge were highly significant when compared to pretest scores. Hence, the alternative hypothesis is accepted.

NURSING IMPLICATIONS:-

The findings of the study have implications for nursing practice, nursing education administration and nursing research.

NURSING PRACTICE:

Today health care delivery system is changing from a care-oriented approach to prevention oriented approach. It mainly focuses on primary prevention, which is aimed at health promotion. Health promotion can be achieved through health education, which brings changes in life style and behavior of individuals. Lack of knowledge, negative attitude and illiteracy of mothers may lead to mortality and morbidity of infants. Hence the training of the mother is very essential. This task can be carried out by the nurses working in clinical and community area to create awareness in the mother thus to prevent the malnutrition and stunted growth. Nurse should create awareness among the mothers regarding growth assessment by using simple anthropometric measurements, breast feeding and interpreting growth indicators for improving the child health status and prevention of malnutrition

Nursing Education:

The nursing personnel are challenged to provide standard and quality nursing care only by keeping abreast of current trends and recent technology. The new technology can reinforce and update the knowledge and skills in particular field. The important tool of the nurse is of a teacher, who provides adequate information to mothers, the care giver and students regarding growth assessment prevention of malnutrition. Nurse educator should revise curriculum and give importance to preventive and promotive aspects of malnutrition in order to meet ever-changing needs of society.

Nursing Administration:

Nurse as an administrator can influence the quality of nursing care in health care organization by planning different health education programs, in service education programs and supervising care at different levels. Nurse administrator should co-ordinate and conducts various educational programs on growth assessment, and utility of anthropometric measurements, interpreting the growth indicators and plotting on growth charts among health workers of hospital & community and should plan outreach activity in collaboration with other agencies in imparting knowledge to the community. Nursing administrator can make a separate budget in their community area to develop health teaching materials in this regard and make accessible to the needy mothers and community.

Nursing Research

Nursing research on mothers education and preventive aspects of malnutrition of infants in very much essential. Currently nursing practice is based on Evidenced based practice. Hence it is important to conduct research on an alternative health care delivery system to understand health care facilities and equip the nurses to be independent practitioners in various health care settings. Health related studies need to concentrate on prevention of malnutrition & stunted growth and utility of anthropometric measurements Research should be carried out on large scale to assess the learning needs of mothers and general public.

Throughout the growth assessment the mother has a key role. The mother has seen the areas of growth assessment, and interpretation, this knowledge helps her to identity growth problems in the children, early detection and treatment. Self Instruction Module also helped the mother to gain the knowledge regarding infant's growth and development assessment.

Limitations

- The study was conducted on a small representative group.
- The sample size was only 60 hence the findings should be generalized.
- The study period was limited to one month.

Recommendations

- Similar study can be undertaken on a large sample for making a more valid generalization
- Similar study can be done by including demographic variables
- A comprehensive study can be conducted between rural and urban mothers of infants
- Similar study can be undertaken by descriptive study
- An experimental study can be undertaken with control group for effective comparison.

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